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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/623,158	07/21/2003	Noriko Uchiyama	023971-0296	2706

22428 7590 03/22/2006

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EXAMINER

JOYCE, WILLIAM C

ART UNIT

PAPER NUMBER

3682

DATE MAILED: 03/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/623,158	Applicant(s) UCHIYAMA ET AL.	
	Examiner William C. Joyce	Art Unit 3682	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on 06 March 2006.

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) 1-14 is/are pending in the application.

4a) Of the above claim(s) 6-9 is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) 1, 2, 4, 5, 10, 11 and 13 is/are rejected.

7) ☒ Claim(s) 3 and 12 is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on 21 July 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☒ All b) ☐ Some * c) ☐ None of:

1. ☒ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. _____.

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____. 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) 6) <input type="checkbox"/> Other: _____.
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DETAILED ACTION

This Office Action is in response to the Election filed March 6, 2006 for the above identified patent application.

Election/Restrictions

1. Claims 6-9 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected group, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on March 6, 2006.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

3. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by either Jatczak et al. (US Patent 4,601,592) or Tsujimoto et al. (US Patent 6,328,477).

The prior art to either Jatczak et al. or Tsujimoto et al. teach roller bearing comprising a pair of rings, a plurality of rollers, the rollers having an end face engaging an annular rib formed of one of the rings.

Referring to column 7, lines 32+, Jatczak et al. discloses the rib being formed of 46100 metal powder having 20% austenite.

Referring to column 7, lines 37+, Tsujimoto et al. discloses that the surfaces of the rings and the rollers are formed of SCr435 having a retained austenite content of 25 to 35 vol%.

With respect to claim 5, it is understood the bearings of either Jatczak et al. or Tsujimoto et al. can be used in a traction oil.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1, 2, 5, 10, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Reference 58-112762 (JP '762) in view of Murakami et al. (US Patent 4,930,909).

JP '762 teaches a continuously variable transmission having a roller bearing, the roller bearing having an inner ring formed with a rib, an outer ring, and a plurality of rollers. The prior art to JP '762 does not teach the claimed bearing properties. The prior art to Murakami et al. teaches (column 5, lines 43+) a bearing having a retained austenite content of less than 45 vol%, a rolling element having a hardness of greater than 63 HRC, and a bearing rings having a hardness of greater than 58 HRC. It would have been obvious to one of ordinary skill in the art at the time the invention was made to form the bearing components of JP '762 with the claimed austenite content and hardness properties, as taught by Murakami et al., motivation being to provide a bearing having a good operating life.

8. Claims 1, 4, 5, 10, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Reference 58-112762 (JP '762) in view of either Jatczak et al. (US Patent 4,601,592) or Tsujimoto et al. (US Patent 6,328,477).

As described above, JP '762 teaches a continuously variable transmission having a roller bearing, the roller bearing having an inner ring formed with a rib, an outer ring, and a plurality of rollers. The prior art to JP '762 does not teach the claimed

bearing properties. The prior art to either Jatczak et al. or Tsujimoto et al. teaches a bearing having the claimed retained austenite content (see above). It would have been obvious to one of ordinary skill in the art at the time the invention was made to form the bearing components of JP '762 with the claimed austenite content, as taught by either Jatczak et al. or Tsujimoto et al., motivation being to provide a bearing having a good operating life.

With respect to claims 4 and 13, JP '762 does not teach a bearing surface having a roughness equal to or small than $0.03\mu\text{m Ra}$. The prior art to Tsujimoto et al. teaches a bearing surface having a surface roughness of $.05\text{--}.2\mu\text{m Ra}$ (column 5, lines 19-50). Further, Tsujimoto et al. teaches the surface roughness should not be less than $.05\mu\text{m Ra}$ in order to maintain proper lubrication during the break-in period in the speed range of 50-100 rpm. However, it is further understood the bearing roughness can be set to a value to less than $.05\mu\text{m Ra}$ in the case where the bearing speed exceeds 100 rpm under normal bearing use. Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the bearing of JP '762 with the claimed surface roughness, as suggested by Tsujimoto et al., motivation being to prevent the bearing from producing excessive heat in a high-speed rotation state.

Allowable Subject Matter

9. Claims 3 and 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Note the bearing structure of Shepelyakovsky et al. ('519) having different HRC values for the rolling member and the ring members.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William C. Joyce whose telephone number is (571) 272-7107. The examiner can normally be reached on Monday - Thursday 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on (571) 272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


William C. Joyce